

## **ABSTRACT**

Disclosed is a method and system for providing a broadcast service to a mobile station over a radio channel in a mobile communication system. A base station determines whether a mask key is requested by a mobile station, based on a predetermined registration identifier included in a registration message received from the mobile station, and transmits a currently valid mask key only when it is determined that another mask key is requested by the mobile station. The base station transmits another mask key to be used next, or transmits another mask key to be used next, together with the currently valid mask key, if the registration message was received within a predetermined skew time before a lifetime of the currently valid mask key expires.